

POPOV, P.V., assistant; KAZAYEV, Yu.G., assistant

Structure of the placenta in bison cows. Trudy AZVI 9:388-389
'56. (MIRA 15:4)

1. Iz kafedry akusherstva (zav. kafedroy - kand.veterinarnykh nauk,
dotsent B.S.Volzhenin) Alma-Atinskogo zooveterinarnogo instituta.
(Placenta) (Bison)

POPOV, P.V., assistant

Cases of abnormal placenta in cows. Trudy AZVI 9:386-387 '56.

(MIRA 15:4)

1. Iz kafedry akusherstva (zav. kafedroy - kand.veterinarnykh nauk
dotsent B.S.Volzhenin) Alma-Atinskogo zooveterinarnogo instituta.

(Placenta--Abnormalities and deformities) (Cows)

TARASENKO, N.I., gornyy inzh.; POPOV, P.V., gornyy inzh.; SHAPIRO, I.G.,
gornyy inzh.

Mechanization of development mining operations. Ugol' Ukr. 4 .
no.7:27-29 J1 '60. (MIRA 13:8)
(Coal mines and mining) (Angers)

KOBRIN, B.B. [translator]; POPOV, P.V. [translator]; RUKAVISHNIKOV,
B.I., red.; SONKIN, D.A., red.; ARTEMOVA, Ye., tekhn.red.

[Development of resistance to insecticides in insects and
acarids; collection of articles] Priobretenie nasekomymi i
kleshchami ustoichivosti k iadam; sbornik statei. Moskva,
Izd-vo inostr.lit-ry, 1959. 331 p. (MIRA 13:8)
(Insects--Physiology) (Insecticides)

ROMENSKIY, N.V.; POPOV, P.V.

Effect of boiling on the protein complex of groats and cereal.

Izv.vys.ucheb.zav.; pishch.tekh. no.1:84-89 '59.

(MIRA 12:6)

1. Odesskiy tekhnologicheskii institut imeni I.V.Stalina, kafedra
biokhimii zerna i zernovedeniya.

(Cereal products) (Proteins)

USSR/Farm Animals. Small Horned Stock.

Q

Abs Jour: Ref Zhur-Biol., No 20, 1958, 92609.

Author : Popov, P.V.

Inst : Alma-Ata Zooveterinary Institute.

Title : The Macrostructure of the Sheep's Placenta.

Orig Pub: Tr. Alma-Atinsk. zoovet. in-ta, 1956, 9, 291-300.

Abstract: A study was made of the sexual organs of 100 sheep which were sacrificed in every month of pregnancy (20 individuals each) and of 10 non-bearing ewes. It was shown that by the 15th day of pregnancy all of three fetal membranes are formed. Placental nutrition of the fetus begins by the 15-20th day. From the first to the 4th month of pregnancy the gestation sac principally grows in length and from

Card : 1/2

VOLZHENIN, Boris Sergeyevich; POPOV, Pavel Vasil'yevich; KOROL', A.,
red.; NAGIBIN, P., tekhn. red.

[Noninfectious abortions in sheep] Nezaraznye aborty u
ovets. Alma-Ata, Kazsel'khozgiz, 1962. 36 p. (MIRA 16:5)
(Abortion in animals) (Sheep)

TOPIC, DATE, INITIALS

771
111.2
.P2

Spravochnik Po Yedokhimikatan (Reference Book on Toxic Chemicals) Pod
Red. N. N. Mel'nikov. Moskva, Goskhimizdat, 1956.
623 P. Illus., Diagr's., Tables.
At Head of Title: Moscow. Nauchnyy Institut Po Udobreniyam I Insektotsifitsidam.
"Literatura": P. 608-611

AVS

KHOKHLOV, P.P.; POPOV, P.Ya.

Surgical treatment of chronic hydrocele by the application of
preserved parietal heterologous peritoneum. Urologiia 25 no.2:
21-24, Apr '60. (MIRA 13:12)
(HYDROCELE) (PERITONEUM--TRANSPLANTATION)

POPOV, P.Ye.

Noise elimination in the machine section of a thermal electric
power station. Elek. sta. 35 no.12:21-24 D '64.

(MIRA 18:2)

DASKALOV, Khr., akad.; STOEV, Kun'o; BOGDANOV, Vasil, st. n. sutr.;
KHRISTOV, Metodi, st. n. sutr.; KHADZHICLOV, Asen A., st. nauchen
sutrudnik; DECHEV, Georgi, ml. n. sutr.; BLIZNAKOV, Georgi, prof.;
PENKOV, Boian, ml. n. sutr.; POPOV, Rumen

Science on the offensive for progress. Nauka i tekhn. mladozh 15
no.7/8:6-10, 56-57 JI-Ag '63.

1. Zam. predsedatel na VNM (for Daskalov). 2. Glavan nauchen
sekreter na ASN (for Khristov). 3. Nauchen sekreter na ASN (for
Bogdanov). 4. Institut za mekhanizatsiia na selskogo stopanstvo
(for Khristov). 5. Direktor na Instituta po neorganicheska i obshta
khimiia pri BAN (for Bliznakov). 6. Predsedatel na Komisiata za
nauka i tekhnicheski progres pri TsK na DKMS (for Popov).

IVANOVA, El.; BANKOV, St.; GUDZHEVA, V.; POPOV, R.

Intervertebral disk herniations and their conservative
treatment. Suvr.med. 14 no.11:51-58 '63.

*

POPOV, R., polkovnik.

Persistently study military science. Kryl. rod. 8 no.2:6-7 P '57.
(Military education) (MLRA 10:4)

POPCH, B.

POPCH, B. Notes on transposition of compensated power for acoust. r. i. i.

Vol. 7, no. 11, Nov. 1956

ELEKTROENGINA

TECHNOLOGY

Bulgaria

So: East European Accession, Vol. 6, No. 5, May 1957

POPOV, R.
POPOV, RADKO.

Energiini i stopanski predpostavki za razvitie na toplofidatsiista v Bulgariia.
Sofiya, Izd. na Bulgarskata akademija na naukite, 1953. 179 p. (Power
and economics as prerequisites to the development of therman power stations
in Bulgaria. German and Russian summaries. bibl., graphs, tables)

SD: Monthly List of East European Accession, (FEAL), LC, Vol. 4, No. 9,
Sept. 1955, Uncl.

POPOV, R.

Basic methods for increasing labor productivity in the maintenance of railroads.
p: 21.
(TRANSPORTNO DELO Vol. 7, no. 6, 1955, SOFIYA)

SO: Monthly List of East European Accessions, (HEAL). LC, Vol. 4, No. 11,
Nov. 1955, Uncl.

LOZANOV, I., inzh.; POPOV, R., mash. inzh.

Controlled semiconductor high-power rectifiers. Elektro-
energii 14 no. 12: 20-23 D '63.

1. TsNIIT (for Lozanov). 2. NIIT (for Popov).

POPCV, R.

Popov, R. Basic methods for increasing labor productivity in the maintenance of railroads. p. 21. TRANSPORTNO DNELO. Sofiya. Vol. 7, no. 6, 1955.

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 11, Nov. 1955, Uncl.

POPOV, R.

Are shops of ~~semi~~processed products a profitable system?
Obshchestv. pit. no. 4:44-45 Ap '63. (MIRA 16:6)

1. Nachal'nik planovogo otdela upravleniya rabochego snab-
zheniya Volgogradgidrostroya, Volzhskiy.
(Restaurant management)

KIRCHEVA, S.; IVANOVA, Ye.; TODOROV, T.; MIKHAYLOV, St.; GUDZHEVA, V.;
POPOV, R.; PETRUNOV, V.; ILIYEVA, P. (Bulgaria)

Effect of nivaline electrophoresis in some diseases of the
nervous system. Vop.kur., fizioter.i lech.fiz.kul't. 28
no.1:26-30 '63. (MIRA 16:4)

1. Iz Nauchno-issledovatel'skogo instituta kurortologii i
fizioterapii v Sofii - Ovcha Kupel (dir. - dotsent K.Kirchev).
(NERVOUS SYSTEM—DISEASES) (ELECTROPHORESIS) (GALANTHAMINE)

7

The Production of Slightly Aged MS. M. Gershgorn and R. Popov. (Stal, 1938, No. 8-9, pp. 31-38). (In Russian). Full details of two heats of MS steel (carbon 0.15-0.25%, manganese 1.2-1.6%, silicon 0.2-0.4%, copper 0.3-0.4%), including metal and slag analyses at various stages, are given. The object of the investigation was to determine whether production conditions could be so chosen that MS steel could be obtained with properties equal to those of the low alloy DS steel (chromium 0.4-0.6%, copper 0.5-0.7%, manganese 0.7-1.0%). The MS steel obtained was subjected to the usual mechanical tests, to artificial ageing and grain size tests and to microstructural examination. The investigation brought out the decisive effect of deoxidisers on the mechanical properties of MS steel for which the required values can be obtained by the use of ferro-aluminium and AMS (iron-manganese-silicon-aluminium) deoxidisers. The production of these is briefly described. Fine grain size can be obtained by the addition of aluminium in the mould. For maximum mechanical properties (tensile strength 60-5 kg. per sq. mm., yield point 37-0 kg. per sq. mm., elongation 20-4%, reduction in area 67-4%), the carbon content should preferably be 0.10-0.23%, the manganese 1.25-1.45%, while the contents of silicon and copper should be equal to the upper limiting values given above.

CHUDINOV, G.M., kand. ekon. nauk, st. nauchnyy sotr.; POPOV, R.A.,
laborant; CHISTYAKOV, G.Ye., mladshiy nauchnyy sotr.;
nauchnyy sotr.; IGNATCHENKO, N.A., otv. red.; SOLOV'YEVA,
Ye.P., tekhn. red.

[Power resources of the Yakut A.S.S.R.] Energeticheskie resursy Iakutskoi ASSR. Pod obshchim rukovodstvom G.M.Chudinova. Iakutsk, Iakutskoe knizhnoe izd-vo, 1962. 265 p. (MIRA 16:1)

1. Akademiya nauk SSSR. Yakutskiy filial, Yakutsk. Otdel energetiki. 2. Zaveduyushchiy otdelom energetiki Yakutskogo filiala Akademii nauk SSSR, Sibirskoye otdeleniye (for Chudinov). 3. Otdel energetiki Yakutskogo filiala Sibirskogo otdeleniya Akademii nauk SSSR (for all except Ignatchenko, Solov'yeva).
(Yakutia—Power resources)

POPOV, R.A., inzh.; KOZLOV, B.K., kand. tekhn. nauk

Choice of efficient municipal heat distribution networks. Prom.
energ. 20 no.6:30-33 Je '65. (MIRA 18:6)

Anodic solution of copper-tin alloys. Yu. V. Balmakov and R. B. Popyan. *Tsvetn. Metall.* 1932, 513-35. —The existing methods of separ. of Sn from anode slimes resulting from electrolysis of bronze have many disadvantages, such as their complexity, high cost and contamination of the product by other metals. In order to recover both Sn and Cu of high purity the authors investigated the conditions of electrolysis of bronze. Instead of being permitted to go into anode slime, the Sn contained in the alloy is dissolved and maintained in the dissolved state in the electrolyte for considerable time. The Sn then may be easily recovered in pure form directly by electrolysis after the Cu had been extd., or by hydrolysis followed by reduction with CO. A method was developed whereby 99.9% of Sn was retained in soln. In the electrolyte, and the Cu obtained was 99.93% pure. The higher the Sn content of the anodes, the greater the part dissolved and kept in solution. The lower the Sn, the lower the loss of Sn in slime. The temp. of the electrolyte should be 15-30°. Agitation should be mechanical but not by air. The surface of the electrolyte should be covered with oil to prevent the oxidation of Sn⁺⁺. The anode c. d. should be 120-150 amp./m.² and the cathode c. d. 70-80 amp./m.². The higher anode c. d. prevents the oxidation of Sn⁺⁺ and maintains high acidity. The formation of Cu "threads" extending from anodes toward cathodes can be prevented by adding 0.6 cc. HCl/l. Electrolyte concns. as high as 10 g./l. Cu and 50 g./l. Sn are possible without affecting the quality of the cathode Cu. Addition of small amts. of Cu in the form of copper sulfate to the electrolyte is recommended. Pb and Zn in the anodes are objectionable and should be eliminated. Preliminary annealing of the anodes improves anodic solution and decreases the loss of Sn in slime.

R. N. Daniloff

B. N. Danilov

CIA-RDP86-00513R0013423

1ST AND 2ND ORDERS										PROCESSING AND PROPERTIES INDEX										3RD AND 4TH ORDERS									
B C																				B-1-6									
Anodic dissolution of copper-tn alloys. Y. V. BAIMANOV and R. B. POROV (Tsvet. Met., 1933, 513-536). —By the method described, electrolysis of bronze is carried out at 15-30° with mechanical (not air) agitation at anodic and cathodic c.d. of 150-180 and 70-80 amp. per sq. in., respectively; 90% of the Sn is retained in the electrolyte, and the Cu obtained is 99.93% pure. The surface of the electrolyte should be covered with oil. The formation of Cu threads extending from anodes towards cathodes is prevented by adding 0.5 c.c. of HCl per litre. Electrolytes may contain > 10 g. Cu and 80 g. Sn per litre. Addition of a small quantity of CaSO_4 is recommended. Pb and Zn should be eliminated from the anodes; preliminary annealing is desirable. Cu. Ans.																													
ASS-11A METALLURGICAL LITERATURE CLASSIFICATION																													
1ST AND 2ND ORDERS										PROCESSING AND PROPERTIES INDEX										3RD AND 4TH ORDERS									
1ST AND 2ND ORDERS										PROCESSING AND PROPERTIES INDEX										3RD AND 4TH ORDERS									

MASHOVETS, V.P.; FORSBLOM, G.V. Prinsipal uchastiye POPOV, R.B.;
GULYANITSKIY, B.S., inzh., retsenzent; FIRSANOVA, L.A.,
red.; ATTOPOVICH, M.K., tekhn. red.

[Electrolytic production of aluminum] Elektroliticheskoe
proizvodstvo aliuminiia; prakticheskoe rukovodstvo dlia
rabochikh, brigadirov i masterov tsekhov elektroliza aliu-
minevykh zavodov. Moskva, Metallurgizdat, 1951. 220 p.
(MIRA 16:7)

1. Vsesoyuznyy alyuminiyevo-magniyevyy institut (for
Mashovets, Forsblom).

(Aluminum--Electrometallurgy)

REMPEL', S.I.; POPOV, R.B.

Determination of current-yield dependence in industrial aluminum-producing electrolyzers. Dokl. AN SSSR 103 no.1:107-108 J1'55.

(MIRA 8:10)

1. Predstavleno akademikom A.N.Frumkinym.
(Aluminum--Electrometallurgy)

ROGOV, A. B.

Control of the expenditure of electrical energy in electrolysis plants Sverdlovsk, Gos. nauchno-tekhn. izd-vo lit-ry po chernoi i tsvetnoi metallurgii, 1945.

1. Electrometallurgy.

POPOV, R.B.

Bibliography on automatic analysis of solutions. Avtom. i prib.
no.1:105-107 '59 (MIRA 13:10)
(Bibliography--Solutions(Chemistry)--Analysis)

POPOV, R.B.

New indirect method for the automatic analysis of multicomponent
solutions. Avtom. i prib. no.1:22-29 '59. (MIRA 13:10)
(Solution (Chemistry)--Analysis)

POPOV, R. B., Cand Tech Sci — (diss) "Analysis of Aluminate
Solutions in Alumina Production by the Multi-parametric Computing
Method," Leningrad, 1960, 18 pp, 150 copies (Leningrad Polytechnical
Institute im M. I. Kalinin) (KL, 49/60, 127)

POPOV, R.B.

Automatic control of the concentration of multicomponent
solutions. [Trudy] LO NTO Prihorprom no.4:153-160 '59.
(MIRA 13:2)
(Electronic control) (Solution(Chemistry))

Popov, R.B.

807/5776

PLANS 1 BOOK REPRODUCTION

Ussrskan SSSRdostavremaya planovaya knizhny

avtomatizatsiya i prirostoizmeneniye; sbornik naukovykh trudov, vyp. 1.
(Automation and Instrument Making; Collected Scientific Works, No. 1)
Miyer, Gosttekhizdat MUDS, 1979. 107 p. 3,000 copies printed.

Ed.: V. Demakiy, Tech. Ed.: E. Gusev; Editorial Board: P.M. Mel'nik
(Chief Ed.), N.F. Zhurav, G.A. Kryzhanov, I.A. Orlov, (Resp. Ed.),
L.A. Shoykhet, and N.F. Varin.

PURPOSE: This collection of articles is intended for scientific and technical
workers and for students of schools of higher education specializing in
automation, telemechanics, and computing.

CONTENTS: The collection contains papers on the automation of metallurgical,
chemical and power engineering and on the development of new instruments,
telemechanical units, and a project of solutions containing 60 items:

A bibliography on automatic analysis of solutions containing 60 items:
42 Boriet, 34 English, 3 German, 4 French and 1 Polish, is included. No person-
alities are mentioned.

Automation of Industrial Processes

Korobko, N.I., A.D. Strelchenko, V.M. Kozlovich, V.I. Kozlov,
M.I. Kozlov, V.M. Artyukhin. Automation System for Open-Search
Thermal Processes

Korobko, N.I., V.I. Kozlov. Open-Search Control System

Shumilov, K.A., B.G. Mikheylov. Automatic Inspection and
Control of Blast Distribution in Open-Search Systems

Popov, R.B. New Indirect Method for the Automatic Analysis of
Multicomponent Solutions

Symon, O.A., Yu.I. Kobus, V.Ye. Gilya, V.M. Arsenyev. Program
Control System of Turbine Lathes

Symon, O.A., and O.Ye. Portitskiy. Shift Pickup Called "Magnetic
Stop"

Automation Equipment

Isakov, V.I. Comparison of Methods of Selecting Telemechanic
Frequency Codes

Shirya, B.K. and V.I. Tupas. Circuitry for Synchronous Reception
of Telemechanic Frequency Codes (Synchronous Generator-Filters)

Shteyn, Y.M., V.P. Korovin. Calculator "Torus-2" for the
Economic Distribution of Active Load in Power Systems

Shteyn, Y.M. and Polubny, K.Yu. Basis for Selecting Criterion
With Respect to the Economy of Registering Net Losses During
Distribution of Load Among Electric Power Stations.

Pechuk, V.I. and V.A. Lopy. Electronic Level Controller

Vagov, I.Y., A.I. Kozlovskiy, L.P. Titenko.
p-Concentration Meter for Potassium Salt Solutions

Kozlovich, V.B., K.M. Kozlovich, Yu.M. Alayash. Highly
Sensitive Germanium Photoresistor

Pogoda, V.A. and B.I. Yashlyov. Gali-Velad Germanium
Pulse Diode

Automatic Control

Shirakov, O.D. New Principle of Control Using High-Speed Nonlinear
Controllers for Industrial Processes With Considerable Lag

Grishchuk, V.P. and Yu.I. Ganyushko. Approximate Methods for
Selecting Optimum Adjustment of Discontinuous Control Systems

Laliyev, R.Ya. and A.V. Gopendukh. Selection of Control
Parameters for a Mercury-Pool Electrolytic Bath

18(4)

SOV/112-59-1-1420

Translation from: Referativnyy zhurnal. Elektrotehnika, 1959, Nr 1, p 195 (USSR)

AUTHOR: Popov, R. B.

TITLE: Automation of Alumina and Aluminum Industry

PERIODICAL: V sb.: Legkiye metally. Vol 4, L., 1957, pp 75-85

ABSTRACT: A review is submitted of automatic controllers and regulators developed by TsLA, VAMI, and Giproaluminiumy and used at the Ural, Volkhov, Dnepr, and Nadvoytsy aluminum plants. Objectives of and prospects for automation of aluminum electrolyzers and alumina production are considered.

Card 1/1

SOV/112-58-2-2501

Translation from: Referativnyi zhurnal, Elektrotekhnika, 1958, N^o 2, p 114 (USSR)

AUTHOR: Popov, R. B.

TITLE: Flow Meters, Density Meters, and Level Meters for Pressured Pulp
(Raskhodomery, plotnomery i urovnemery dlya pul'py pod davleniyem)

PERIODICAL: V sb.: Teploenerg. pribory i regulatory, M.-L. Mashgiz, 1956,
pp 164-187

ABSTRACT: A unified system of automation of the measurement and control of flow, density, and level of pulp under pressure is described; the system is used in the alumina industry. It is based on typical differential manometers and simple separating devices, each consisting of a vessel with an elastic rubber bag that separates the pulp from the balancing liquid of the instrument. To measure the rate of flow, a telemeter-type differential manometer is used combined with a detachable Venturi tube in the neck of which a replaceable cylindrical insert of wear-resisting hard alloy is placed. This insert wears out in about 3 months, under working conditions with hot alkaline boxite pulp.

Card 1/2

SOY/112-58-2-2501

Flow Meters, Density Meters, and Level Meters for Pressured Pulp

Separating vessels are arranged vertically, over the Venturi tube, and connected to it by relatively thick piping (20 mm diameter or more). Kinematic and electrical schemes of the flowmeter with batch signaling are considered; the flowmeter has a special integrating attachment, with electrical contacts, which is built in a secondary Type E-612 instrument. Pulp-density measurement is based on a relationship between a pressure drop in a vertical pipe section with an ascending flow and the liquid density. Corresponding equations are analyzed, and corrections are calculated (e.g., a correction allowing for the descent of hard particles in an upward flow). The automatic pulp density meter is a ring-type differential manometer with an inductive DKER pickup and a secondary EVS recorder; the differential manometer, via separating devices, is connected to two points, on a vertical pipe section, which lie at a certain (vertical) distance apart. Methods of calculation and calibration of the density meter are set forth. A differential manometer-level meter for measuring pulp in an enclosed pressure vessel is described (with its scheme).

K. S. Sh.

Card 2/2

SOV/137-58-8-16625

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 8, p 53 (USSR)

AUTHORS: Popov, R.B., Levin, M.V., Munits, I.N.

TITLE: On the Prerequisites for Automation of Enterprise in the Aluminum Industry (O predposylkakh avtomatizatsii predpriyatiy alyuminiyevoy promyshlennosti)

PERIODICAL: Sb. materialov tekhn. inform. Gos. in-t po proyektir. alyumin., magniyevykh i elektrod. z-dov, 1957, Nr 1, pp 36-38

ABSTRACT: An examination is made of the major conditions for automation of processes in the aluminum industry, namely, continuity of the process, operational reliability and controllability of the equipment, and good dynamic process characteristics. Examples are presented of the models and dimensions of plant and equipment specified in plans and yet unsuited to the requirements of automation. The problem of the need to develop control attachments for unstable and readily crystallizing solutions and pulps of alumina production is examined, also the need for expanding investigations of the objects and methods of automation, as well as introduction of special means of automation

Card 1/2

SOV/137-58-8-16625

On the Prerequisites for Automation of Enterprise (cont.)

meeting the operational needs under the conditions obtaining in the production of aluminum and alumina.

V. Shch.

1. Aluminum industry--USSR
2. Aluminum industry--Automation

Card 2/2

SOV/137-58-9-18746

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 9, p 85 (USSR)

AUTHOR: Popov, R.B.

TITLE: Automation of the Production of Alumina and Aluminum (Avtomatizatsiya proizvodstva glinozema i alyuminiya)

PERIODICAL: V sb.: Legkiye metally, Nr 4, Leningrad, 1957, pp 75-85

ABSTRACT: Problems and perspectives for automation of the production of Al_2O_3 and Al are examined, and data on certain instruments in use and under development in the USSR at the present time to automate these processes are presented.

Ye.Z.

1. Aluminum--Production 2. Industrial plants--Automation

Card 1/1

POPOV, R.B., inzhener.

New apparatus for the automatic control of hydrometallurgical,
hydrochemical and concentrating processes. TSvet.met. 28
no.1:20-29 Ja-F '55. (MIRA 10:10)
(Flowmeters) (Automatic control) (Nonferrous metal industries)

POPOV, R. B.

Automatic density meter and regulator of the density of pulp
circulated through pipes under pressure. TSvet.met. 28 no.4:46-58
Jl-Ag '55. (MIRA 10:11)

(Ore dressing)

POPOV, R.B.

New automatic gravimetric density meter and regulator for solutions
and pulps. TSvet.met. 28 no.6:25-29 N-D '55. (MIRA 10:11)

1. Vsesoyuznyy alyuminiyevy-magniyevyy institut.
(Nonferrous metal industries--Equipment and supplies)

Popov, R B.

18
✓ Addition of a radioactive alloy to molten metal. R. B. Popov and S. I. Rempel. U.S.S.R. 102,235, Mar. 20, 1956. The alloy contg. the radioactive component is wrapped in several layers of paper and then suspended in the molten metal. This procedure is used in electrolytic production of Al to det. the ratio of current consumed to the yield of metal. The radioactivity of the metal is compared with the radioactivity of the radioactive alloy. M. H. ...

1-4E2C
1-4E32
1-4E45
1-Rm 1
1-jw m

NS RB
Amx

Popov. No

Automatic control of the concentration ratio of two components dissolved in water, R. B. Popov, U.S.S.R. 102,796, Mar. 25, 1956. Further improvements in the app. described in U.S.S.R. 97,291. An automatically balanced bridge resistance has an arm consisting of a variable resistance built into a potentiometer which controls the concn. of 1 component. A 2nd arm is similarly wired to a potentiometer controlling the ratio of the concns., while a 3rd arm has a resistance proportional to the angle of rotation of a balancing motive power corresponding to the concn. of the 2nd component. The bottoms of the containers carrying the components and provided with calibrated openings are submerged in the mixing vessel to prevent distortion caused by surface tension when the liquids flow out in contact with the atm.

-St. Joseph-

POPOV, R.B.

Flow meters, thickness meters, and level indicators for slurry
under pressure. Trudy IO NTO Priborprom. no.3:164-187 '56.

(Liquid level indicators) (Flow meters)

POPOV, K. B.

Automatic control and regulation of the composition of
pulp by radioactive radiation. S. I. Rempel and P. B.
Popov. *Isotopy* 1956, No. 18, 47-53. The γ -
radiation of Cs^{137} and Co^{60} is used to control the water con-
tent of pulp. For the optimum thickness of the layers of
pulp absorbing the γ -radiation the values 8 cm. for Cs^{137} and
9.4 cm. for Co^{60} are detd. The transmitted γ -radiation is
measured by an ionization counter which triggers an elec.
control app.

R. Gora
RM RMR

3
4E2C
1-RMR
1-9UM

ПОПОВ, Р.Б.

Determination of the current efficiency of industrial alu-
minum cells by means of radioactive indicators. S. I. ~~Remel~~
Remel and R. B. Popov. *Tekhnicheskaya Metalurgiya*, No. 3,
50-58; cf. *CA* 50, 8323c. A mixt. contg. Al with Co^{60} ,
 Zr^{95} , In^{113} , or other elements is added to the Al bath. From
the given wt. of the added mixt. Q the amt. of the metal in
the bath $Q_m = Q_{\text{mixt}}/n_m$, where n_1 and n_m are the specific ac-
tivity of the original mixt. and that of the bath after com-
plete mixing, resp. I. Bencowitz

RMZ.
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S/137/61/000/010/052/056
A006/A101

AUTHOR: Popov, R.B.

TITLE: A new indirect method for the automatic analysis of multi-component solutions

PERIODICAL: Referativnyy zhurnal. Metallurgiya, no. 10, 1961, 1, abstract 10K1
(V sb. "Avtomatiz. i priborostroyeniye", no. 1, Kiev, Gostekhizdat, UkrSSR, 1959, 22 - 29)

TEXT: It was established that the methods of direct determining the concentration of components in a solution can not be automated satisfactorily. Therefore indirect methods are suggested for analyzing multi-component systems which are based on the measurement of their physical and physico-chemical parameters, depending on the concentration of components in the solution. The indirect methods are classified into inter-connected and selective ones. The former include: densimetry, viscosimetry, conductometry, refractometry, calorimetry and others, whose values depend on the concentration of all the components in the solution. The second group includes: potentiometry, pH-metry, emission and flame spectrophotometry, polarography and other methods, whose values depend

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A new indirect method ...

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selectively on the concentration of only definite components in the solution. To bring about automatic control by one of the aforementioned methods, the dependence is accurately determined between the concentration of components in the solution and the values of the corresponding physico-chemical parameters. Automatic analyzers and computers should also be available. The mathematical substantiation of the method is given. It can be used for analyses of gas mixtures. There are 86 references. ✓

A. Maslova

[Abstracter's note: Complete translation]

Card 2/2

GEORGIYEVSKIY, Yu.I., inzh.; POPOV, R.B., kand. tekhn. nauk

Characteristics of the selection of the regulated magnitude in
the automatic control of an aluminum electrolyzer. Khim.
mashinostr. no.1:107-114 '65. (MIRA 18:9)

Popov, A. B.

Determination of yield of aluminium in industrial electrolytic plants. S. I. Rempel and R. B. Popov (Dokl. Akad. Nauk SSSR, 1955, 103, 107-108). Alloy containing ^{60}Co or ^{90}Zr (1-2 mc) is added to the molten Al at the cathode, and the sp. activity of samples of Al tapped off is determined after passage of known amount of current. The amount of Al produced is given by $Q = Q_0 \frac{a_s}{a_a}$, where Q_0 is the amount of alloy added, and a_s and a_a are the sp. activities of the alloy and the sample, respectively.

R. TRUSCOK.

POPOV, R.B.

REMPEL', S.I.; POPOV, R.B.

Radioactive radiation used in the automatic control and regulation of pulp composition. TSvet. met. 29 no.10:47-54 0 '56. (MLRA 9:12)

1. ULTI (for Rempel') 2. Vsesoyuznyy alyuminiyevo-magniyevyy institut (for Popov).

(Radioactive substances--Industrial applications)
(Ural Mountain region--Aluminum--Metallurgy)
(Automatic control)

POPOV, R.B.

Automatic pulp level indicators and regulators. TSvet.met.29 no.2:
65-69 P 156. (MLRA 9:6)

1.Vsesoyuznyy alyuminiyevye-magniyevyy institut.
(Hydrometallurgy--Apparatus and supplies)(Automatic control)

POPOV, R.B.

Automatic pulp level indicators and regulators. TSvet.met.29 no.2:
65-69 P '56. (MLRA 9:6)

1.Vsesoyuznyy alyuminiyevy-magniyevyy institut.
(Hydrometallurgy--Apparatus and supplies)(Automatic control)

Ропов, Р. В.

USSR/ Metallurgy - Chemical technology

Card 1/1 Pub. 22 - 29/46

Authors : Rempel', S. I., and Popov, R. B.

Title : Determination of aluminum output by the current in industrial electrolyzers

Periodical : Dok. AN SSSR 103/1, 107-108, Jul 1, 1955

Abstract : A method for measuring the metal output of industrial electrolyzers by determining their current consumption for a certain period of time, is derived. By stabilizing the conditions of measuring the specific activity of the alloy and Al samples from the baths, the authors established the direct proportionality between the concentration of the radioactive isotope in the alloy and in the metal and their specific activity. The degree of reduction of the specific activity of the metal sample taken from the bath compared with the activity of the alloy introduced into the bath serves as a measure of the solution of the alloy with pure Al already in the bath.

Institution :

Presented by : Academician A. N. Frumkin, April 1, 1955

POPOV, R.B.

Automatic pulp level indicators and regulators. TSvet.net.29 no.2:
65-69 P '56. (MIRA 9:6)

1.Vsesoyuznyy alyuminiyevy-magniyevyy institut.
(Hydrometallurgy--Apparatus and supplies)(Automatic control)

REMPEL', S.I.; POPOV, R.B.

Radioactive tracer method for determining the yield based on current consumption in industrial electrolytic aluminum production. TSvet. met.29 no.3:50-58 Mr '56. (MLRA 9:7)
(Aluminum--Electrometallurgy)(Radioactive tracers--Industrial applications)

LITVAK, A.K.; POPOV, R.G.; STAROSTIN, A.P.

Investigation of highly concentrated aerosols. Trudy Inst. dvig.
no.6:21-29 '62. (MIRA 16:5)
(Aerosols)

POPOV, R.I.; RASHKEVICH, I.Ya.; ITKINA, R.A.; MUNTIAN, V.I.

Drying of coal flotation concentrates and other free-flowing materials in a cyclone-type gas apparatus. Koks i khim. no.1: 6-7 '64. (MIRA 17:2)

1. Dnepropetrovskiy koksokhimicheskiy zavod.

POPOV, R.I.; FESENKO, N.I.; SIPOVICH, S.Yu.; SHELKOV, S.K.

Continuous fusion of sulfur. Koks. i khim. no. 3:46-48 '61.
(MIRA 14:4)

1. Dnepropetrovskiy koksokhimicheskiy zavod.
(Dnepropetrovsk—Coke industry—By-products)

DAL', V.I.; FINKEL'SHTEYN, P.K.; GOLENDA, V.F.; POPOV, R.I.; PASHKEVICH, A.Z.; KONRADI, V.Ya.

Increasing the size of metallurgical coke by a new method of selecting coal charges. Koks i khim. no.1:22-27 '60. (MIRA 13:7)

1. Dnepropetrovskiy khimiko-tehnologicheskij institut (for Dal', Finkel'shteyn & Golenda). 2. Dnepropetrovskiy koksokhimicheskiy zavod (for Popov, Pashkevich and Konradi).
(Dnepropetrovsk--Coke)

SOV/68-59-4-3/23

AUTHORS: Popov, R.I., Rashkevich, I.Ya., Markovskiy, F.I. and
Itkina, R.A.

TITLE: Some Design Improvements of Centrifuges of the Type UV-1
(Nekotoryye konstruktivnyye uluchsheniya tsentrifug
tipa UV-1)

PERIODICAL: Koks i Khimiya, 1959, Nr 4, pp 8-11 (USSR)

ABSTRACT: Some design improvements of centrifuges of the UV-1 type
used for dewatering of fine concentrate mixed with coarse
slurries are described and illustrated (figures 2a, 3a,
2b and 3b respectively before and after redesign).
Operational results of this type of centrifuges before
and after the redesign are given in tables 1 and 2.
Further improvements in the design of the centrifuge are
being considered. There are 3 figures and

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Some Design Improvements of Centrifuges of the Type UV-1
2 tables.

ASSOCIATION: Dnepropetrovskiy Koksokhimicheskiy Zavod
(Dnepropetrovsk Coking Works)

Card 2/2

Popov, R.I.

SOV/68-59-3-10/23

AUTHORS: ~~Popov, R.I.~~, Rashkevich, I.Ya., Itkina, R.A. and Ruzhina, I.Ye.

TITLE: Utilisation of Spent Solutions from Sulphur Recovery Plants Operating by the Arsenical-Soda Method (Utilizatsiya otrabotannykh rastvorov mysh'yakovsodovoy seroochistki)

PERIODICAL: Koks i Khimiya, 1959, Nr 3, pp 45-46 (USSR)

ABSTRACT: The economical possibility of recovering sodium thiocyanide and sodium thiosulphate from spent liquors from the plant for the purification of coke oven gas from hydrogen sulphide by the arsenical-soda method was investigated. Two methods were tested: 1) Spent liquor after preliminary neutralisation is passed into a reactor where it is heated to boiling and treated with sulphuric acid to decompose thiosulphite ($3\text{Na}_2\text{S}_2\text{O}_3 + \text{H}_2\text{SO}_4 \rightarrow 3\text{Na}_2\text{SO}_4 + 2\text{S}_2 + \text{H}_2\text{O}$). The solution is retained for 4 hours at about 100°C and the sulphur separated is filtered off. The filtrate is evaporated to a concentration of NaCNS of 700 g/l (fig 1).

Card 1/2 2) Spent solution is evaporated by bubbling hot air to a

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Utilisation of Spent Solutions from Sulphur Recovery Plants
Operating by the Arsenical-Soda Method

concentration of thiosulphite of 700 g/l, cooled to 60-65°C and filtered from slurry containing sodium sulphate and mechanical admixtures. The filtrate is cooled to 28°C and the thiosulphite crystallised is filtered off. If necessary the filtrate is then further evaporated to a required concentration of sodium thiocyanide (fig 2). The second scheme which will yield a mixture of thiocyanide and thiosulphite is recommended as a more economical one. There are 2 figures.

ASSOCIATION: Dnepropetrovskiy koksokhimicheskiy zavod
(Dnepropetrovsk Coking Works)

Card 2/2

1. Popov, R. I.

2. The drying of steel-pouring ladles with the waste products of combustion. S. S. Piskarev, R. I. Popov, I. R. Artemov, G. S. Paterlov and A. M. Gidromirskiy. *Teoriya i Prakt. Met.* No. 11, 42-5 (1947). Expts. conducted at the open hearth department of the Leningrad metallurgical plant made it possible to dry the steel-pouring ladles with the combustion waste gases instead of burning the more expensive mazut. The withdrawal of combustion gases did not affect the operation of the furnace.

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POPOV, R.L., inzh.

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The effect of the residual concentration of sulfuric acid after leaching on copper cementing and its losses with tailings in the Mostovich process. Izv. AN UzSSR. Ser. tekhn. nauk 8 no.6 74-77 '64. (MIRA 18:3)

1. Sredneaziatskiy filial Gosudarstvennogo nauchno-issledovatel'skogo instituta tsvetnykh metallov.

OKOLOVICH, A.M., kand.tekhn.nauk; POPOV, R.L., inzh.

Development of methods for measuring the specific surfaces of
mineral powders. Nauch. soob. IGD 16:60-70 '62. (MIRA 16:8)
(Flotation)

POPOV, R.N.; SEMENOV, N.Ya.

Foundry equipment in foreign countries. Lit. proizv. no.2;
16-25 F '65. (MIRA 18:6)

POPOV, A.N., SEMENOV, A.Ya.

Foundry equipment in foreign countries. 14. prolav. no. 1
16-23 Mr '69. (MPPA 18-6)

POPOV, R. N.

USSR/ Engineering - Machine tools

Card 1/1 Pub. 128 - 4/23

Authors : Popov, R. N.

Title : A new design of heavy horizontal planing and milling machine

Periodical : Vest. mash. 2, 21 - 22, Feb 1955

Abstract : A description is presented of a heavy horizontal planing and milling machine designed and produced by the A. I. Efremov's "Tyazhstankogidropress" plant, for milling components up to 4 meters in width, 12 meters in length, and weighing up to 100 tons. Technical specifications are listed. Illustrations.

Institution:

Submitted:

POPOV, R.N., inzhener

A new heavy-duty planer-type milling machine. Vest. mash. 35
no.2:21-22 F '55. (MLRA 8:6)
(Milling machines) (Planing machines)

PLAKSIN, I.N.; OKOLOVICH, A.M.; POPOV, R.L.

Residual concentration of xanthate following the flotation process in
ore dressing plants. Izv. AN SSSR. Otd. tekhn. nauk. Met. i gor. delo
no.1:204-208 Ja-F '63. (MIRA 16:3)

(Flotation—Equipment and supplies)

POPOV, R.V., inzh.

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(Concrete reinforcement) (Sand-lime products)

STROGANOV, A.I., kand.tekhn.nauk; BOGATENKOV, V.F., kand.tekhn.nauk;
KOLOSOV, M.I., kand.tekhn.nauk; ZVEREV, B.F., inzh.; DAVIDYUK,
V.N., inzh.; POPOV, R.V., teknik

Heat balance of the riser head of an ingot. Stal' 22 no.1:27-29
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COMMON ELEMENTS										COMMON TRANSITION METALS										COMMON NON-METALS										COMMON RARE EARTH ELEMENTS									
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CROSS ELEMENTS		COMMON ELEMENTS	
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ASB-SLA METALLURGICAL LITERATURE CLASSIFICATION		1ST AND 2ND CROSS	
1ST AND 2ND CROSS		1ST AND 2ND CROSS	

Manufacture of Nichrome. R. V. Fugate. *Metallurg. 19, 103* (1935); *Chem. Zentr.* 1935, II, 220; cf. Jenkins, *et al.*, C. A. 23, 3203. — A report on the manufacture of Nichrome in crucibles or in the elec. furnace. The purity of the Ni and Cr to be used is of particular importance. Deoxidizing agents used, heat treatment and the working of the Nichrome obtained are discussed. M. G. Moore

13

Manufacture of Nichrome. R. V. Popov. (*Vestnik Metallpromishlennosti* (Messenger Metal Ind.), 1933, 15, 87-103; *Chem. Zentr.*, 1935, 106, (11), 3290; *C. Abstr.*, 1936, 30, 8120).—[In Russian.] A report on the manufacture of Nichrome in crucibles or in the electric furnace. The purity of the nickel and chromium to be used is of particular importance. The deoxidizing agents used, and heat-treatment and working of the Nichrome obtained are discussed.—S. G.

ASD-55A METALLURGICAL LITERATURE CLASSIFICATION

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[Optical masers (lasers)Opticheskie kvantovye generatory
(lazery). Moskva, Izd-vo inostr. lit-ry 1962. 114 p.
Translated from the English. (MIRA 15:11)
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[Theory of superconductivity; collection of articles] Teoriia
sverkhprovodimosti; sbornik statei. Pod red. N.N.Bogoliubova.
Moskva, 1960. 416 p. Translated from the English and German.
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(Superconductivity)

LEMMLEYN, G.G., red.; CHERNOV, A.A., red.; POPOV, R.Yu., red.;
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[Elementary processes of crystal growth; microphenomena occurring
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Elementarbye protsessy rosta kristallov; mikroiavleniia, proiskho-
diashchie pri roste, isparenii, rastvorenii i travlenii kristallov.
Sbornik statei. Perevod pod red. G.G.Lemmaleina i A.A.Chernova.
Moskva, Izd-vo inostr.lit-ry, 1959. 300 p. [Collection of translated
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ZINGER, Dzh.[Singer, J.R.], prof.; ZUYEV, V.S.[translator]; KARLOV, N.V.,
[translator]; SHMAONOV, T.A. [translator]; BUNKIN, F.V., red.
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[Masers; solid state generators and amplifiers] Mazery; kvanto-
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[Quantum paramagnetic amplifiers] Kvantovye paramagnitnye usiliteli;
sbornik statei. Moskva, Izd-vo inostr.lit-ry, 1961. 287 p.

(MIRA 14:12)

(Paramagnetic amplifiers)

GRIBOVA, M.P., tekhnicheskiy redaktor; YAPPA, Yu.A., redaktor; KOMAR, A.P.,
otvetstvennyy redaktor, professor; POPOV, R.Yu, redaktor.

Classification of elementary particles [translations and surveys
of foreign periodical literature]. Problemy sovremennoi fiziki 8
no.11:1-173 '56. (MLRA 10:1)
(Particles, Elementary)

BAZHANOVA, N.P. [translator]; FRIDRIKHOV, S.A. [translator]; KAPITSA, M.L. [translator]; LEPESHINSKAYA, V.N. [translator]; SHUL'MAN, A.R., red.; POPOV, R.Yu., red.; KLIMENKO, S.V., tekhn.red.

[Characteristic energy losses of electrons in solids; collection of articles] Kharakteristicheskie poteri energii elektronov v tverdykh telakh; sbornik statei. Moskva, Izd-vo inostr.lit-ry, 1959. 270 p.
(MIRA 12:7)

1. Sotrudniki kafedry elektroniki Leningradskogo politekhnicheskogo instituta (for Bazhanova, Fridrikhov, Kapitsa, Lepeshinskaya).
(Electrons)

ACC NR: AP7003003

(N)

SOURCE CODE: UR/0413/66/000/024/0111/0111

INVENTORS: Kulibanov, Yu. M.; Popov, S. A.; Ryabukhin, O. V.; Sakharov, V. V.

ORG: none

TITLE: A device for regulating the working regime of a marine diesel. Class 60, No. 189689 [announced by Leningrad Institute of Waterway Transport (Leningradskiy institut vodnogo transporta)]

SOURCE: Izobreteniya, promyshlennyye obraztzy, tovarnyye znaki, no. 24, 1966, 111

TOPIC TAGS: diesel engine, marine engine

ABSTRACT: This Author Certificate presents a device for regulating the working regime of a marine diesel when the ship is traveling in narrow channels. The device contains a gauge for measuring the rpm in relation to the channel depth. This gauge acts on the directing mechanism of the movable support for the shaft of the fuel pump (see Fig. 1). To simplify the construction and to lower the operation cost, centrifugal weights serve as the rpm gauge. These weights operate on a movable spring-loaded clutch connected by a mechanical tie rod to the distributing valves which motivate the directing mechanism. The directing mechanism may constitute a hydraulic servometer.

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UDC: 621.436-545.74-552

ACC NR: AP7003003

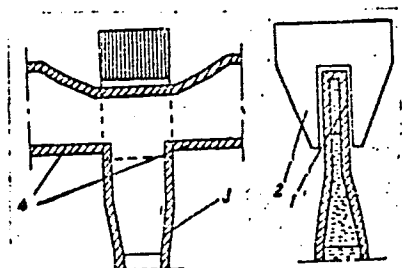


Fig. 1. 1 - duct;
2 - magnetic circuit;
3 - outflow nipple;
4 - outflow nipples

with a lever feedback to the valves. Orig. art. has: 1 figure.

SUB CODE: 21/

SUBM DATE: 21Oct65

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BR

ACCESSION NR: AT4010743

S/2839/63/000/002/0102/0111

AUTHOR: Popov, S. A. (Candidate of technical sciences); Skryabina, T. A.
(Engineer)

TITLE: Investigation of the carrying capacity of rectangular-section eccentrically loaded columns of aluminum alloy AD35-T1

SOURCE: ASIA SSSR. Institut stroitel'ny*kh konstruktsiy. Stroitel'ny*ye konstruktsii iz alyuminiyevy*kh splavov, no. 2, 1963, 102-111

TOPIC TAGS: aluminum alloy, alloy AD35-T1, construction material, buckling coefficient, stress, aluminum

ABSTRACT: The recently obtained aluminum alloy AD 35-T1 is a candidate for building structures carrying great loads. The alloy is particularly suitable because of its mechanical, technological (weldability, press-formability, suitability for anodizing), and corrosion-resistant properties. For acceptance in construction practice, it is necessary to establish design requirements applicable to this material; in particular, one must determine the values of buckling coefficient φ . Hence, the authors carried out investigations at MIIT on the carrying capacity of solid rectangular-section eccentrically-loaded
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ACCESSION NR: AT4010743

columns of AD35-T1. In these investigations, the same methods were applied as P. N. Polikarpov (professor) and S. A. Popov (one of the authors) used previously at MIIT for eccentrically-loaded columns of low-alloy steel and of the aluminum alloy D1-T, respectively. The present investigation dealt with both the elastic and the elasto-plastic ranges of work. A stress-strain diagram for AD-35-T1 was obtained from compression tests. A reduced modulus of deformation was introduced to account for non-linear stress distributions across the section and for variations of bending along the column axis. As part of the results of the investigation, a chart was constructed (Fig. 1 of the Enclosure) representing critical stresses versus the slenderness ratio λ of columns for a parametric range 0 to 1.2 of relative eccentricity $\frac{a}{r}$ (a - eccentricity; r - radius of gyration of the cross-section). Three formulas according to different design specifications have been given for practical assumptions of total relative eccentricity values to account for the initial curvature of column and for the eccentric application of the compressive load at the end section:

$$\frac{a}{r} = 0.05 + 0.001 \lambda \quad (1)$$

as specified in TUPM-47 MPS (old design specifications for bridges;

$$\frac{a}{r} = 0.125 + 0.0018 \lambda \quad (2)$$

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according to TU SN200-62 (new design specifications for bridges);

$$\frac{a}{r} = 0.003 \lambda \quad (3)$$

according to TU SN113-60 (specifications for Avial alloys). With the use of the Carrying Capacity Chart in Fig. 1 of the Enclosure, buckling coefficients φ were determined for the alloy AD 35-T1 and tabulated. Eccentricities were accounted for by formulas (1), (2), and (3) above, resulting in 3 columns of values. φ values for other Avial alloys were included in the Table for comparison. The φ values for AD 35-T1, the strongest of the Avial alloys, were 11-20% lower than those for other types at the considered slenderness ratios. For slenderness ratios above 100, values of λ can be practically determined from the Euler force divided by a safety factor of 1.3. Orig. art. has: 5 figures, 12 formulas, and 1 table.

ASSOCIATION: Institut stroitel'nykh konstruktsiy, ASIA SSSR (Institute of Structural Construction, ASIA SSSR)

SUBMITTED: 00

DATE ACQ: 17Jan64

ENCL: 01

SUB CODE: MM, MT
Card 3/4

NO REF SOV: 004

OTHER: 000

ACCESSION NR: AT4010743

ENCLOSURE: 01

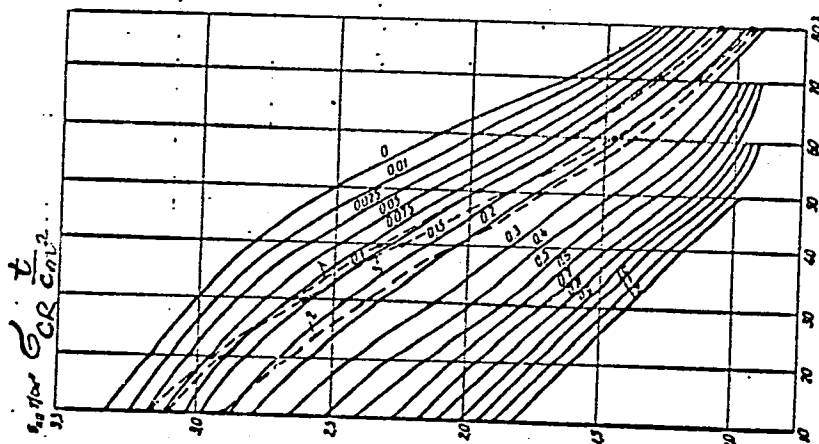


Fig. 1. Carrying Capacity Chart for Rectangular - Section Eccentrically Loaded AD 35-T1 - Alloy Columns.

Full lines represent critical stress versus slenderness ratio at various eccentricities $\frac{e}{b}$ as a parameter; dash-lines 1, 2, and 3 correspond to eccentricities computed according to formula 1, 2, and 3, respectively.

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L 63658-65 EWT(1)/EEC(b)-2/ENA(h)

ACCESSION NR: AR5003350

S/0271/64/000/011/A087/A087
629.12-52.019.3

SOURCE: Ref. zh. Avtomatika, telemekhanika i vychislitel'naya tekhnika.
Svodnyy tom, Abs. 11A490

AUTHOR: Popov, S. A.; Neuymin, Ya. G.; Svetlikov, Yu. A.

TITLE: Engineering-and-economic indices of reliability of shipborne automatic systems

CITED SOURCE: Tr. Leningr. in-ta vodn. transp., vyp. 59, 1964, 3-8

TOPIC TAGS: automatic system, shipborne automatic system, automatic system reliability

TRANSLATION: The necessity is noted of quantitative evaluation of reliability of the existing and planned shipborne automatic systems. It is suggested that the reliability problems of shipborne automatic systems be subdivided into three categories: (1) the most important devices whose faultless operation ensures safety of the entire ship; (2) the devices whose failures do not endanger the ship but may cause losses whose cost exceeds that of the automatic devices;

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(3) other automatic devices whose reliability value is determined by the cost of their repairs. The principal reliability index of the first category is represented by the faultless operation during the entire navigation; the second category, by the average economic loss caused by system failures during the navigation; the third category, by the average overall expenses for restoration of all faulty system elements during the navigation. Using of the above engineering and economic reliability indices would permit discriminating the economic factors, developing recommendations for reliability enhancement, requesting the industry to improve various elements, and developing the economically sound systems of preventive maintenance. One illustration.

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